



Appendix A

RF Test Data for Zigbee (Conducted Measurement)

Product Name: USB Zigbee Dongle

Test Model: GZ91

Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Can Kun
Supervised by:	Nick Peng





A.1 -6dB Bandwidth

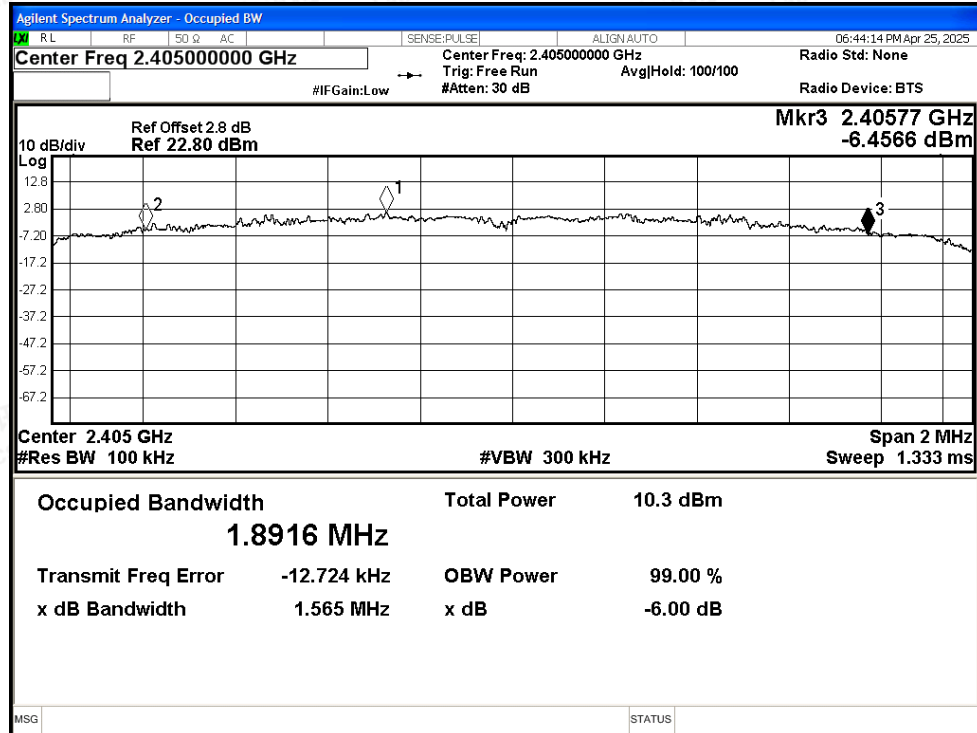
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	ZIGBBE	2405	Ant	1.565	>=0.5	Pass
NVNT	ZIGBBE	2440	Ant	1.628	>=0.5	Pass
NVNT	ZIGBBE	2480	Ant	1.522	>=0.5	Pass



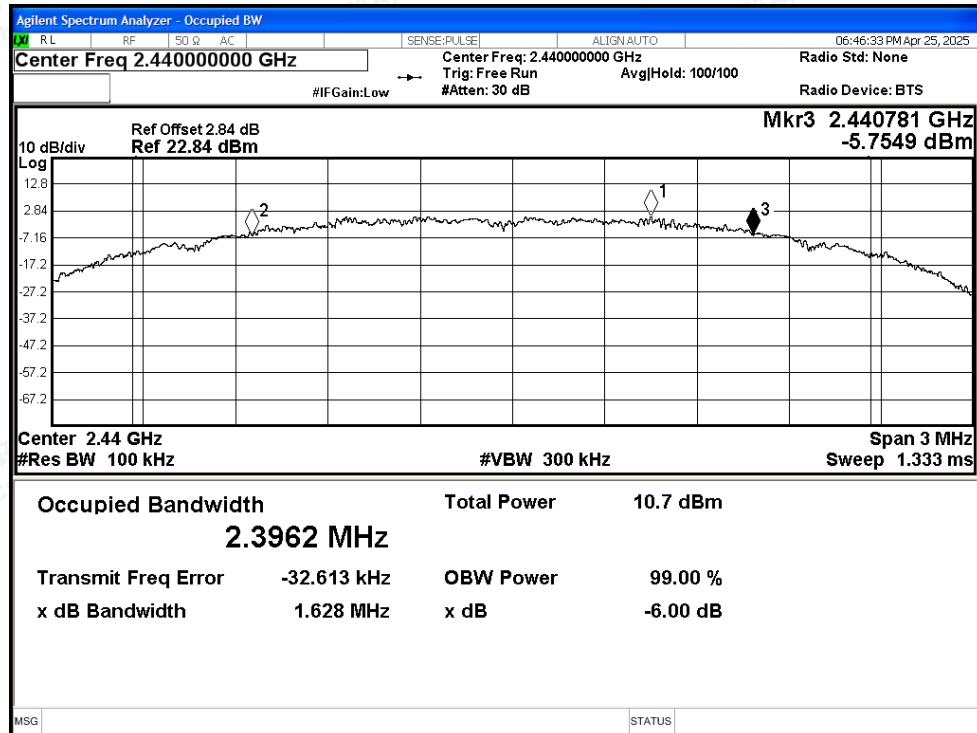


Test Graphs

-6dB Bandwidth NVNT ZIGBBE 2405MHz Ant



-6dB Bandwidth NVNT ZIGBBE 2440MHz Ant

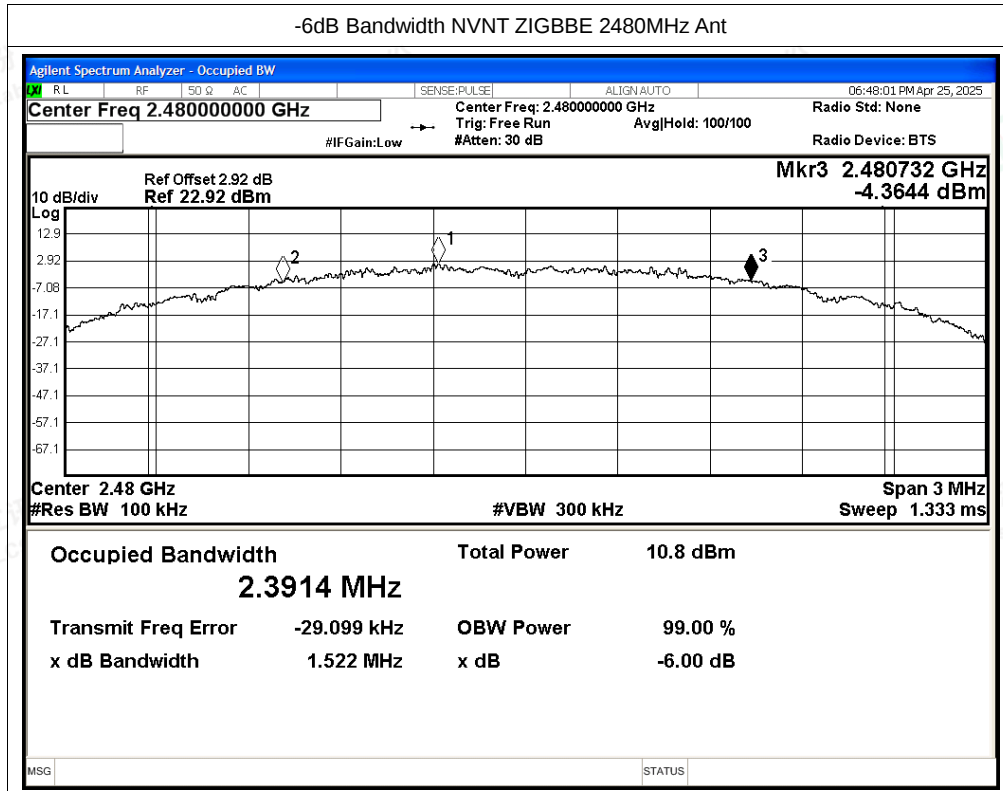


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A.2 Maximum Peak Conducted Output Power

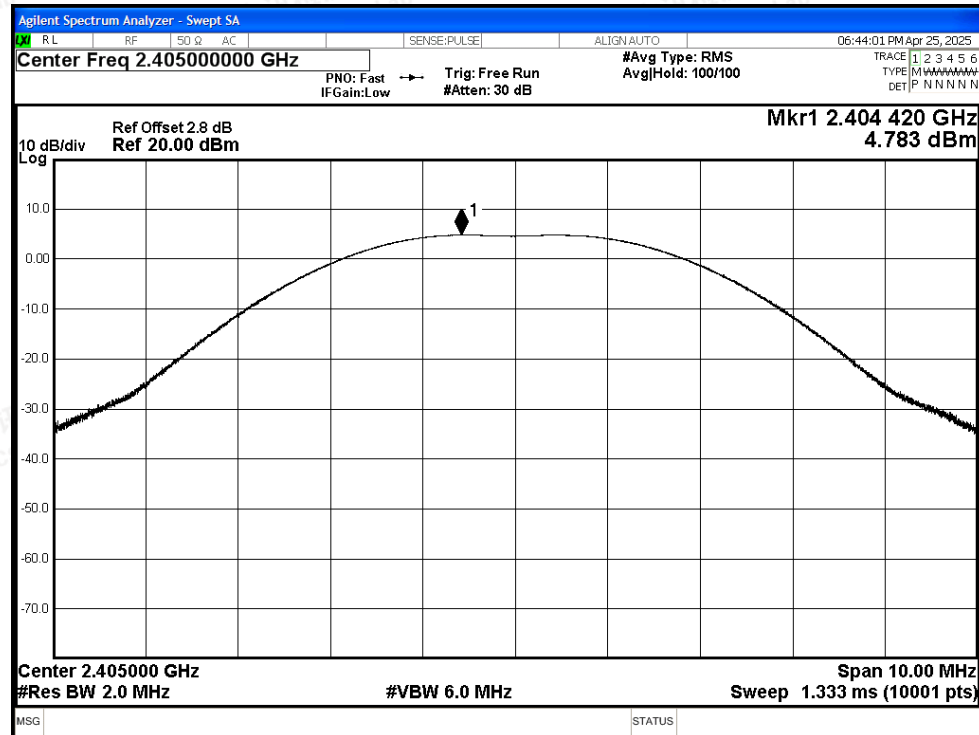
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	ZIGBBE	2405	Ant	4.78	30	Pass
NVNT	ZIGBBE	2440	Ant	4.99	30	Pass
NVNT	ZIGBBE	2480	Ant	5.08	30	Pass



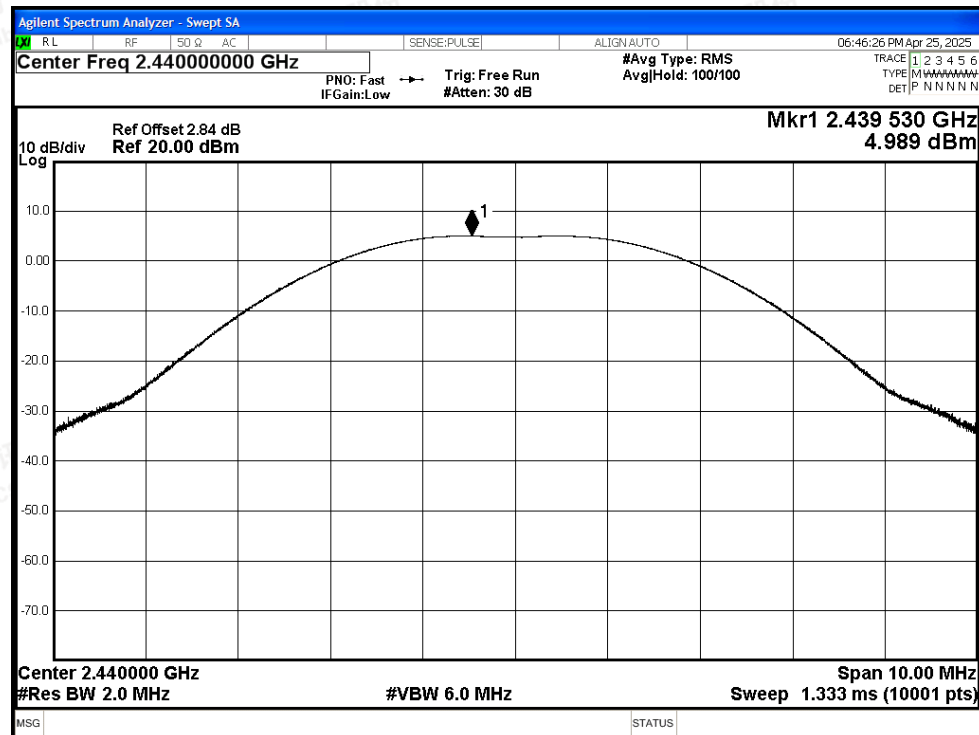


Test Graphs

Power NVNT ZIGBBE 2405MHz Ant



Power NVNT ZIGBBE 2440MHz Ant

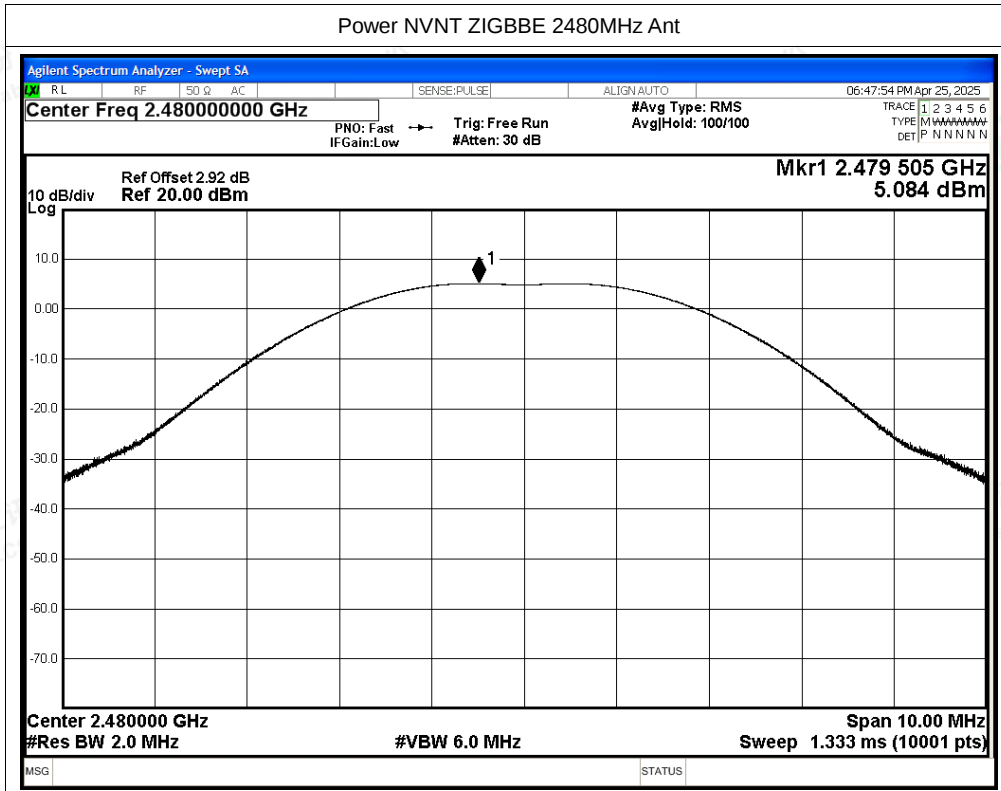


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A.3 Maximum Power Spectral Density Level

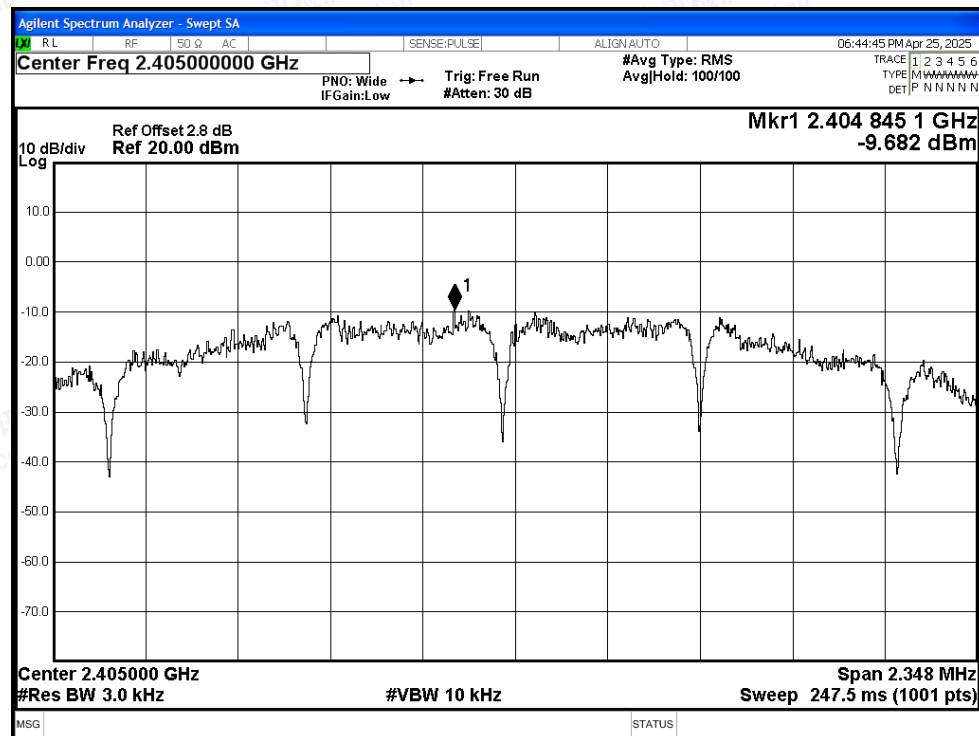
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	ZIGBBE	2405	Ant	-9.68	8	Pass
NVNT	ZIGBBE	2440	Ant	-10.37	8	Pass
NVNT	ZIGBBE	2480	Ant	-11.49	8	Pass



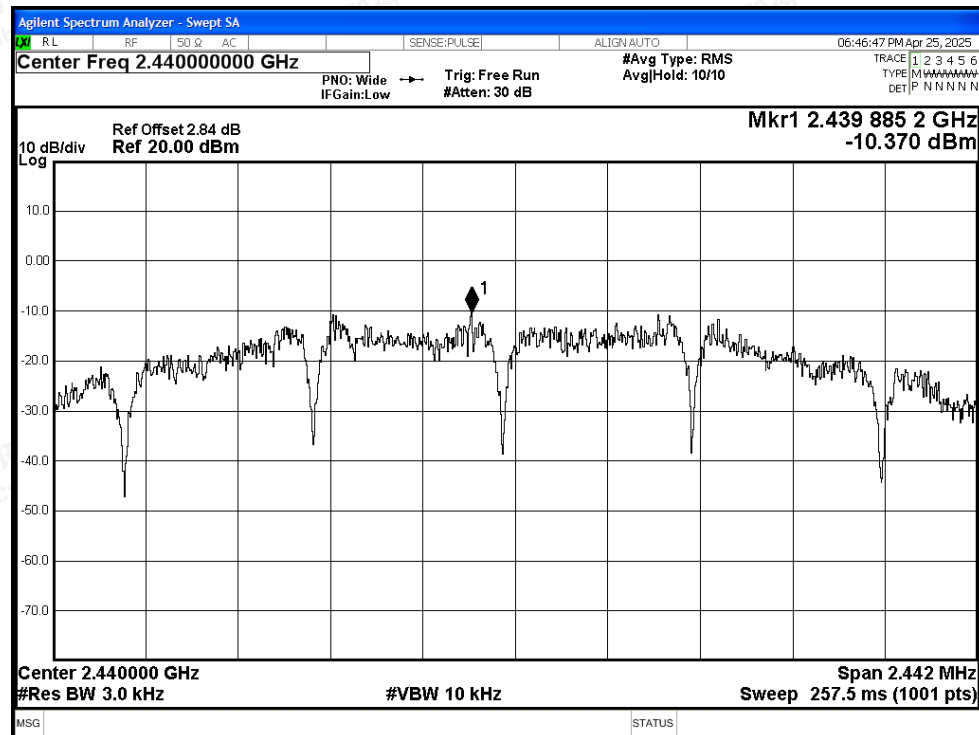


Test Graphs

PSD NVNT ZIGBBE 2405MHz Ant



PSD NVNT ZIGBBE 2440MHz Ant

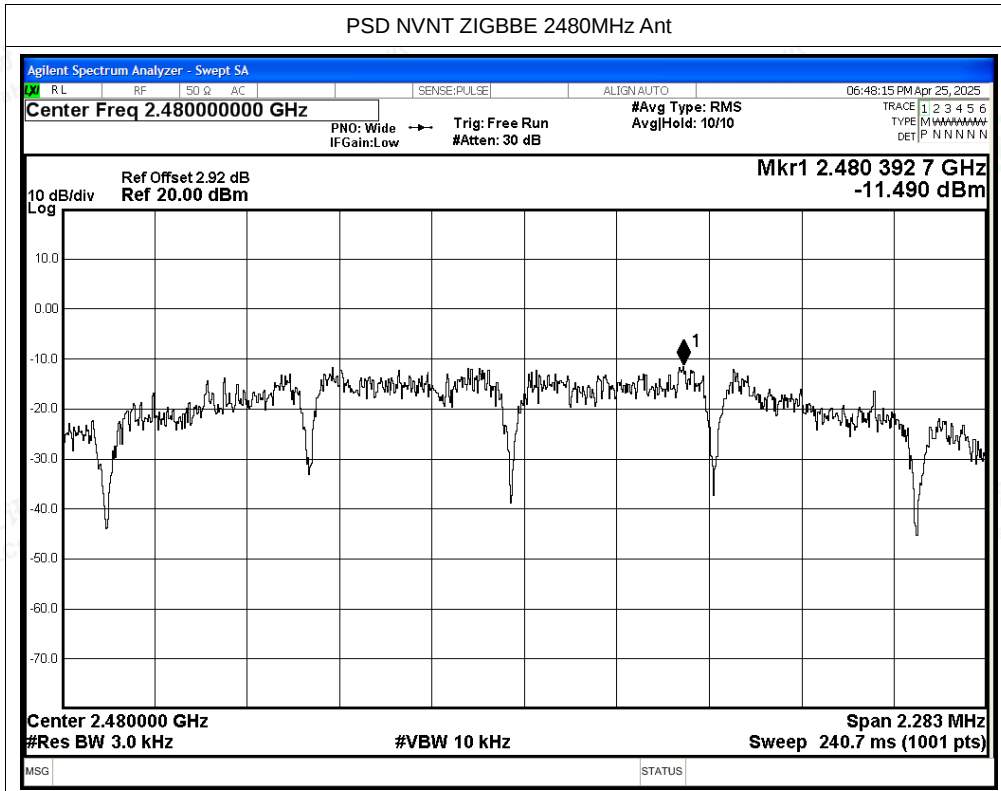


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A.4 Band Edge

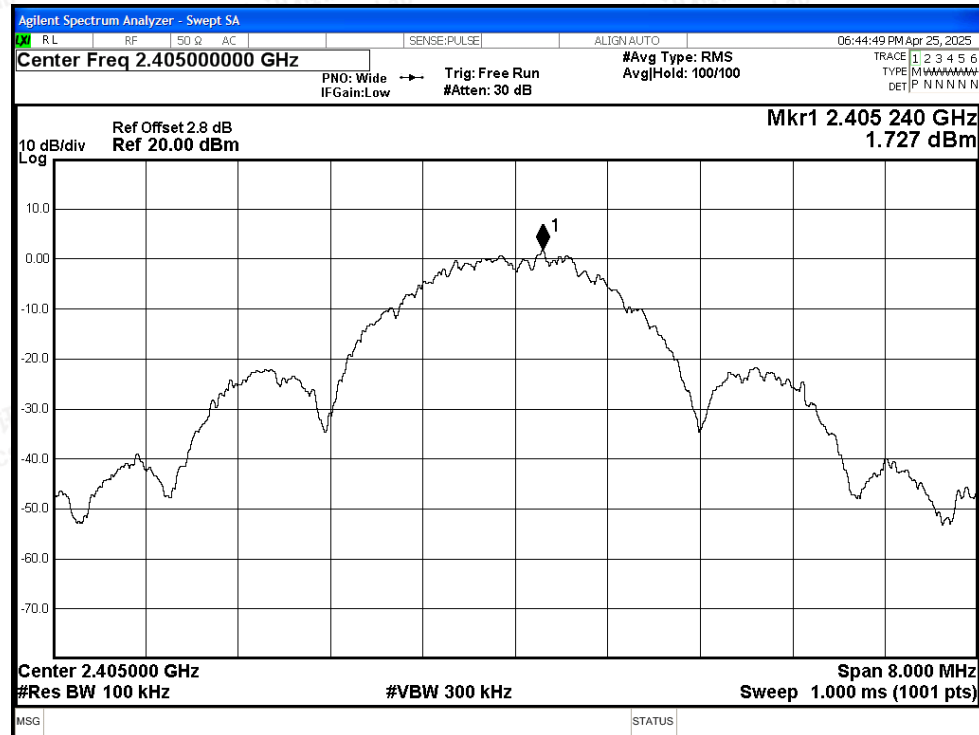
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	ZIGBBE	2405	Ant	-48.67	-20	Pass
NVNT	ZIGBBE	2480	Ant	-44.01	-20	Pass



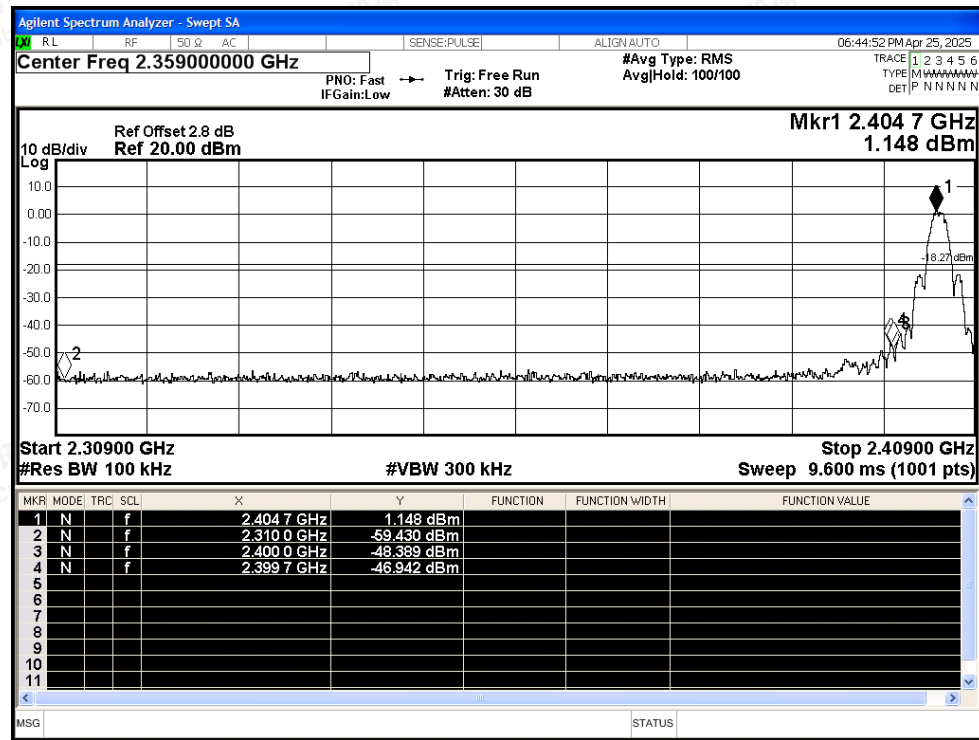


Test Graphs

Band Edge NVNT ZIGBBE 2405MHz Ant Ref



Band Edge NVNT ZIGBBE 2405MHz Ant Emission



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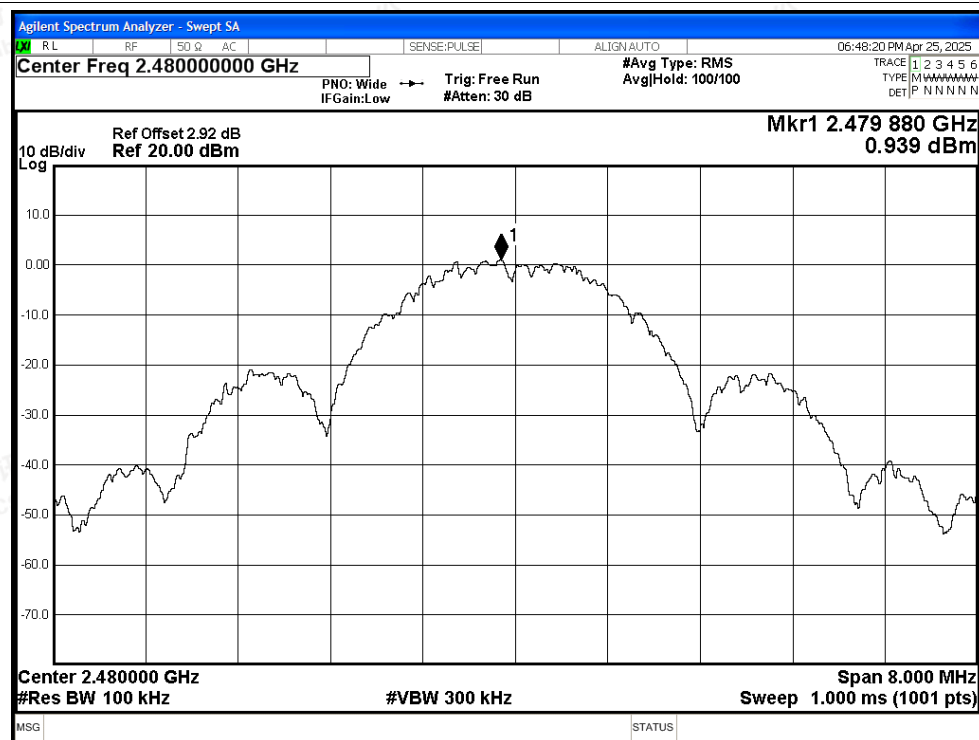
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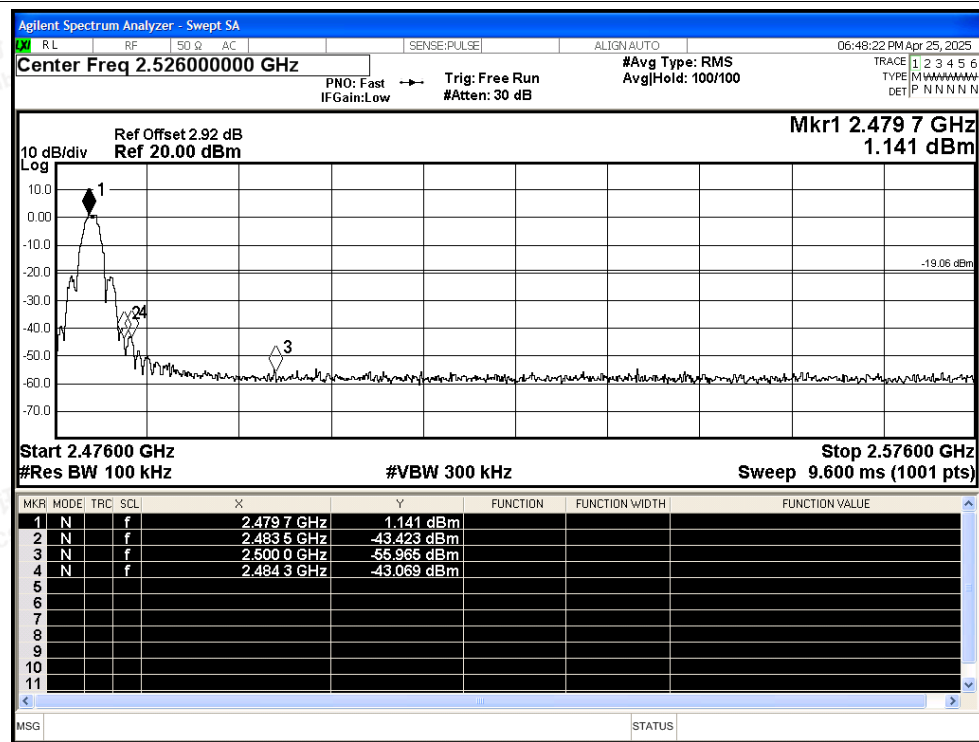
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Band Edge NVNT ZIGBBE 2480MHz Ant Ref



Band Edge NVNT ZIGBBE 2480MHz Ant Emission



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A.5 Conducted RF Spurious Emission

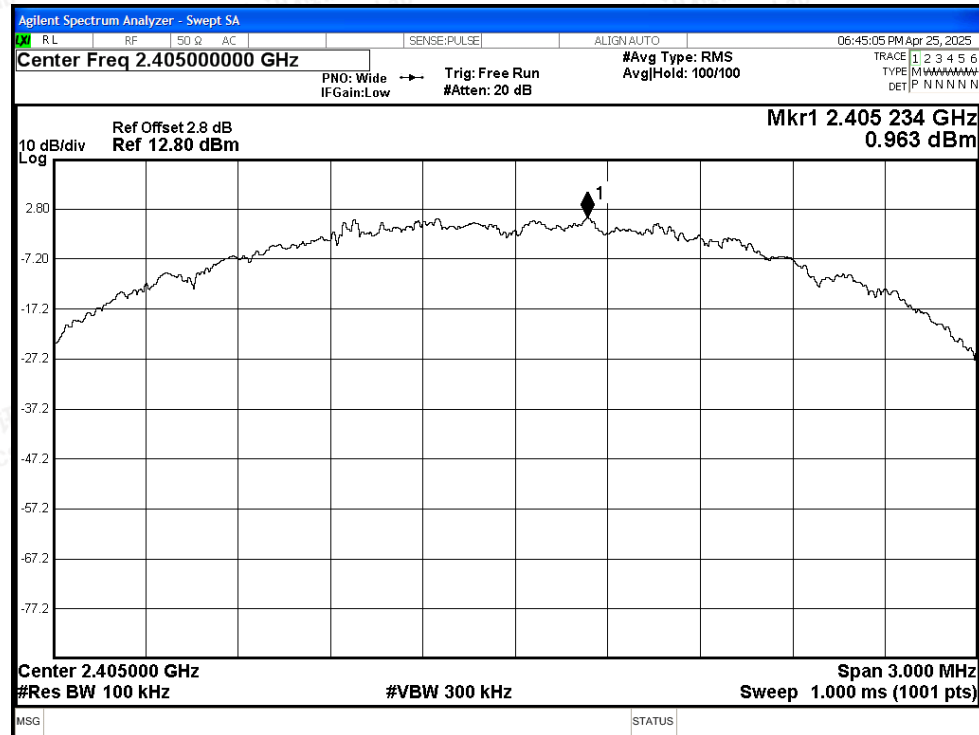
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	ZIGBBE	2405	Ant	-44.96	-20	Pass
NVNT	ZIGBBE	2440	Ant	-48.29	-20	Pass
NVNT	ZIGBBE	2480	Ant	-47.71	-20	Pass



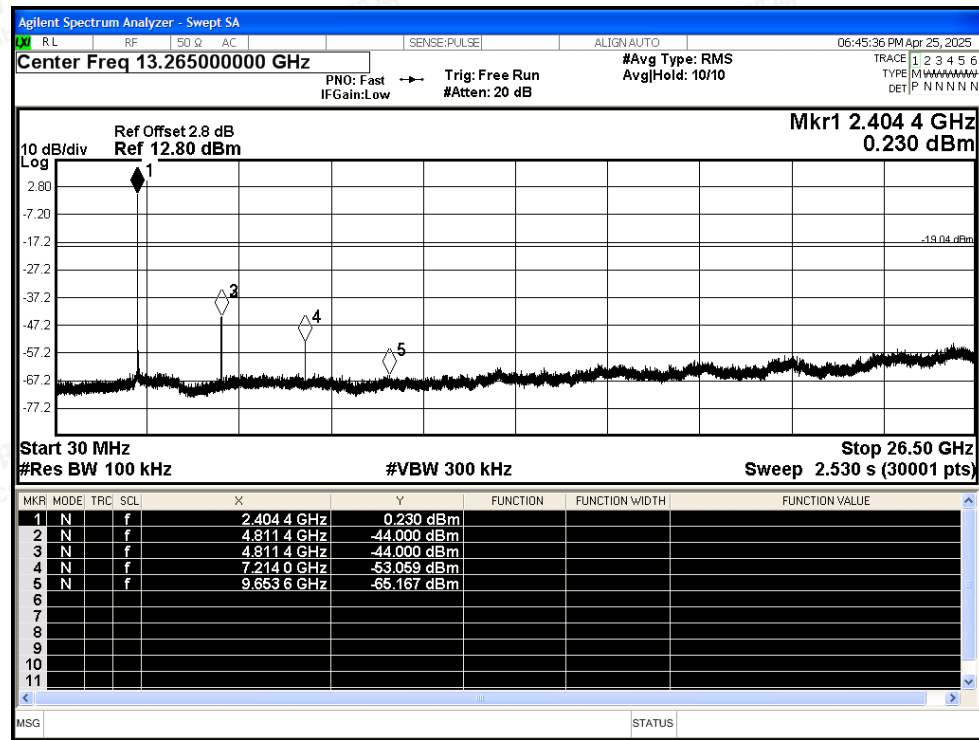


Test Graphs

Tx. Spurious NVNT ZIGBBE 2405MHz Ant Ref



Tx. Spurious NVNT ZIGBBE 2405MHz Ant Emission



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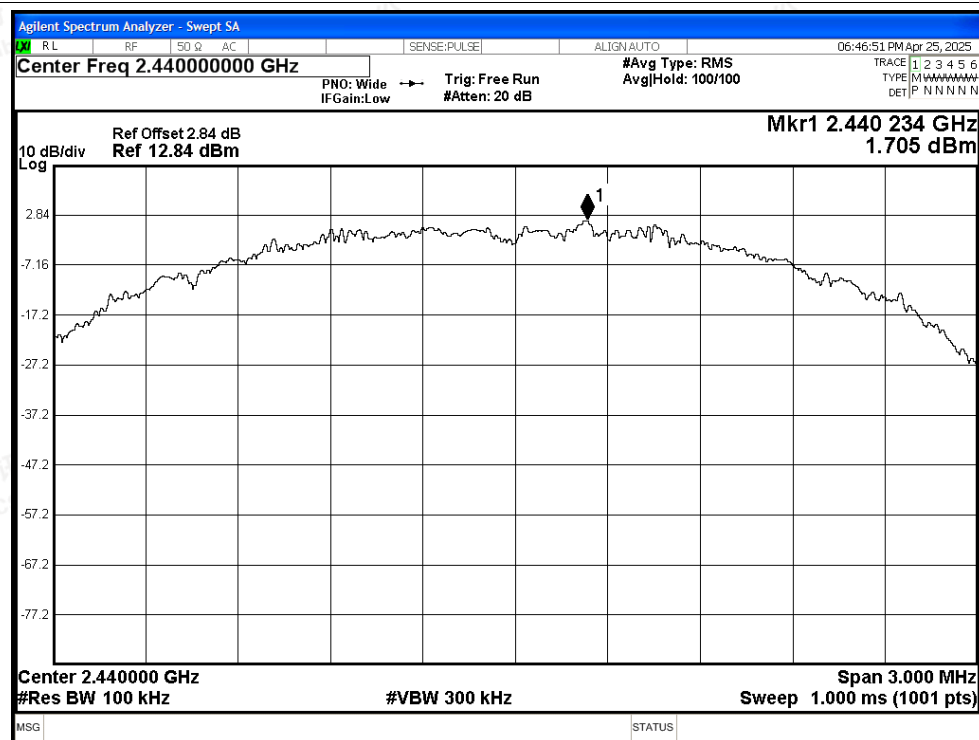
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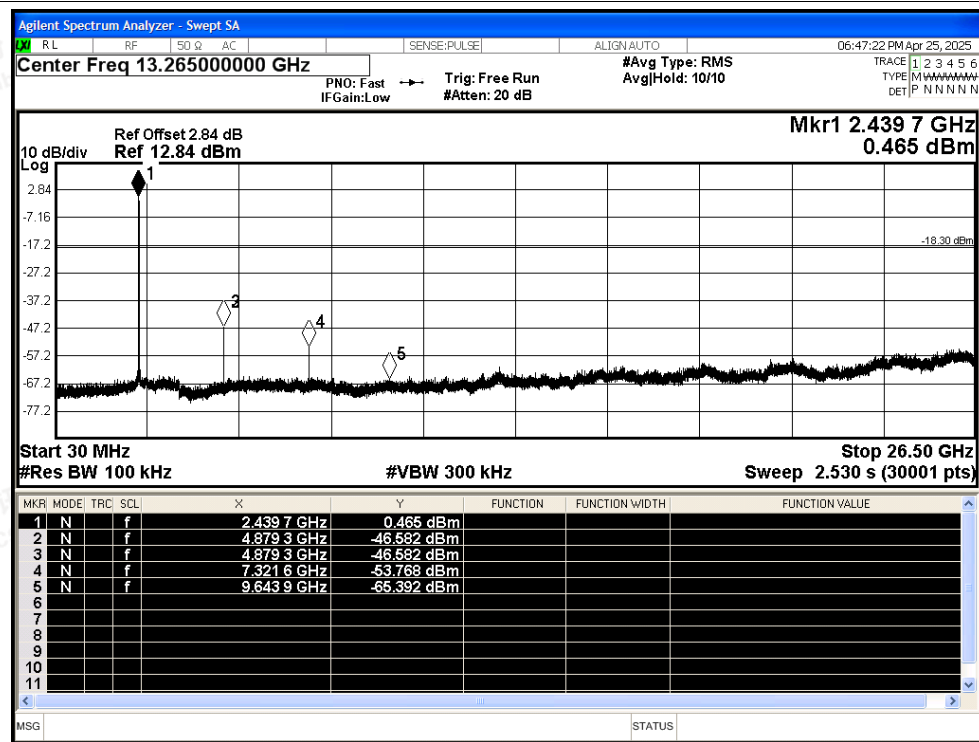
Scan code to check authenticity



Tx. Spurious NVNT ZIGBBE 2440MHz Ant Ref



Tx. Spurious NVNT ZIGBBE 2440MHz Ant Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

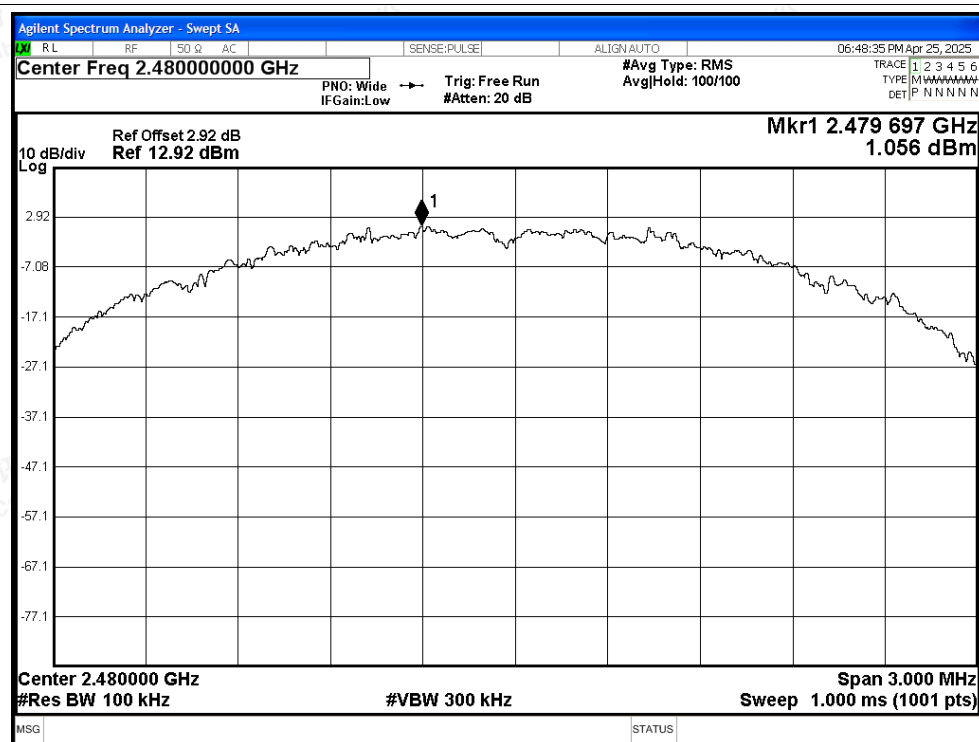
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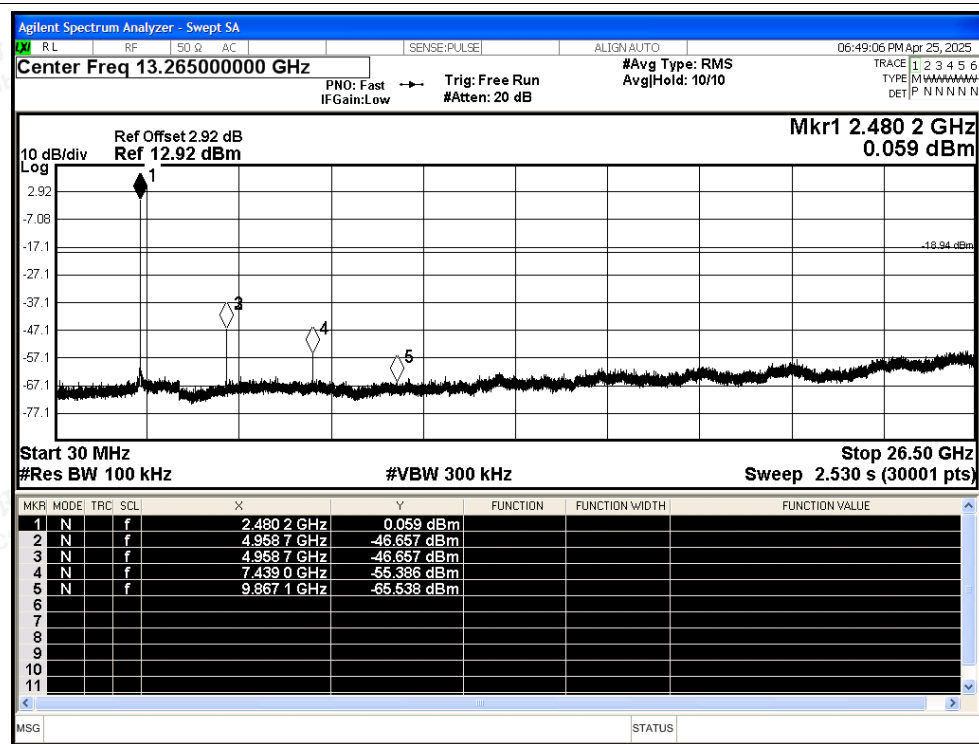
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Tx. Spurious NVNT ZIGBBE 2480MHz Ant Ref



Tx. Spurious NVNT ZIGBBE 2480MHz Ant Emission



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A.6 Duty Cycle

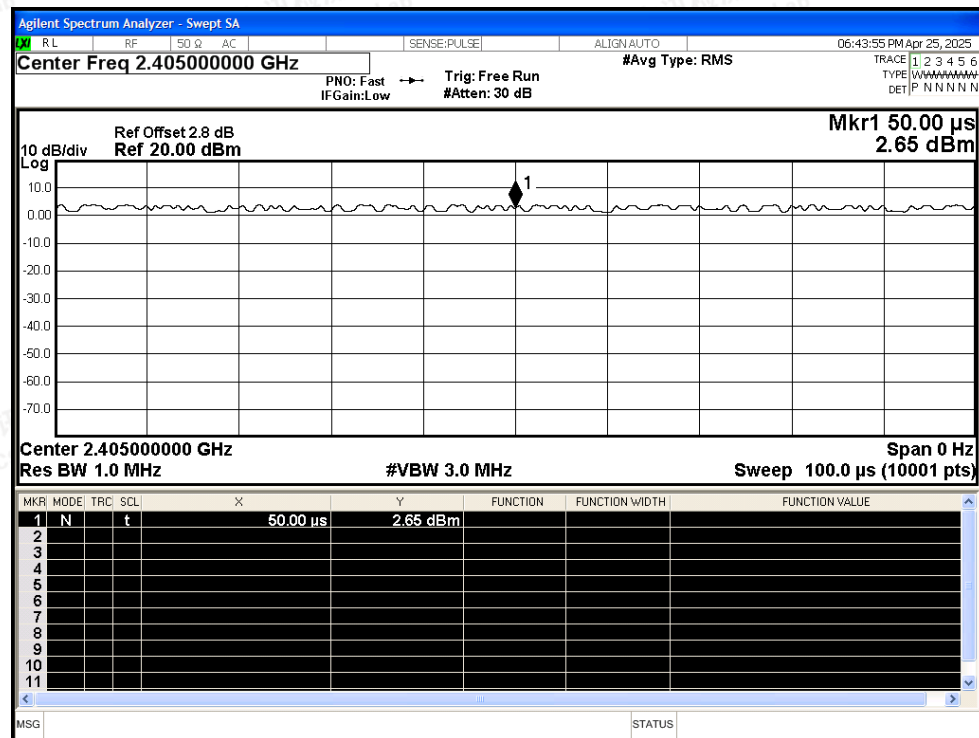
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	ZIGBBE	2405	Ant	100	0	0
NVNT	ZIGBBE	2440	Ant	100	0	0
NVNT	ZIGBBE	2480	Ant	100	0	0



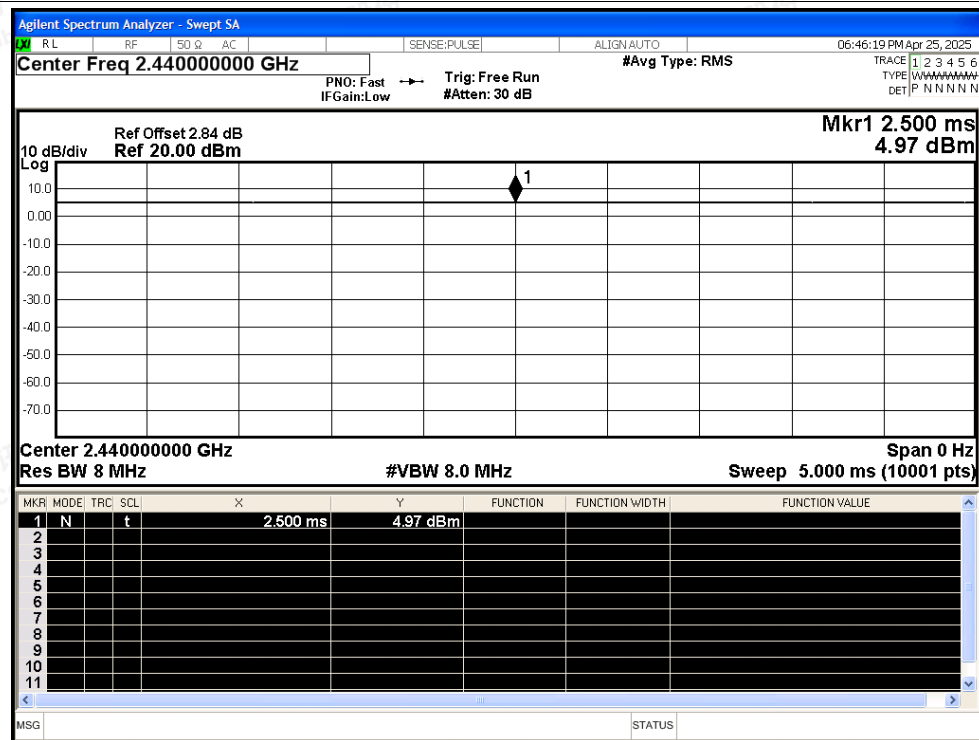


Test Graphs

Duty Cycle NVNT ZIGBBE 2405MHz Ant



Duty Cycle NVNT ZIGBBE 2440MHz Ant

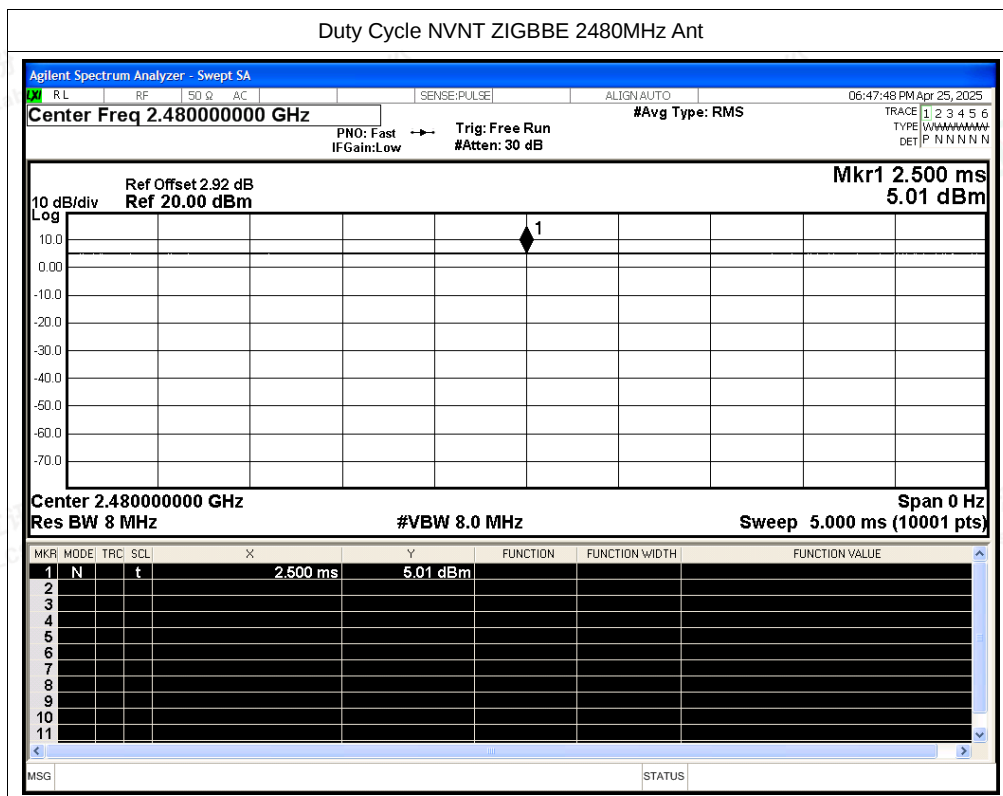


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A.7 Restrict Band

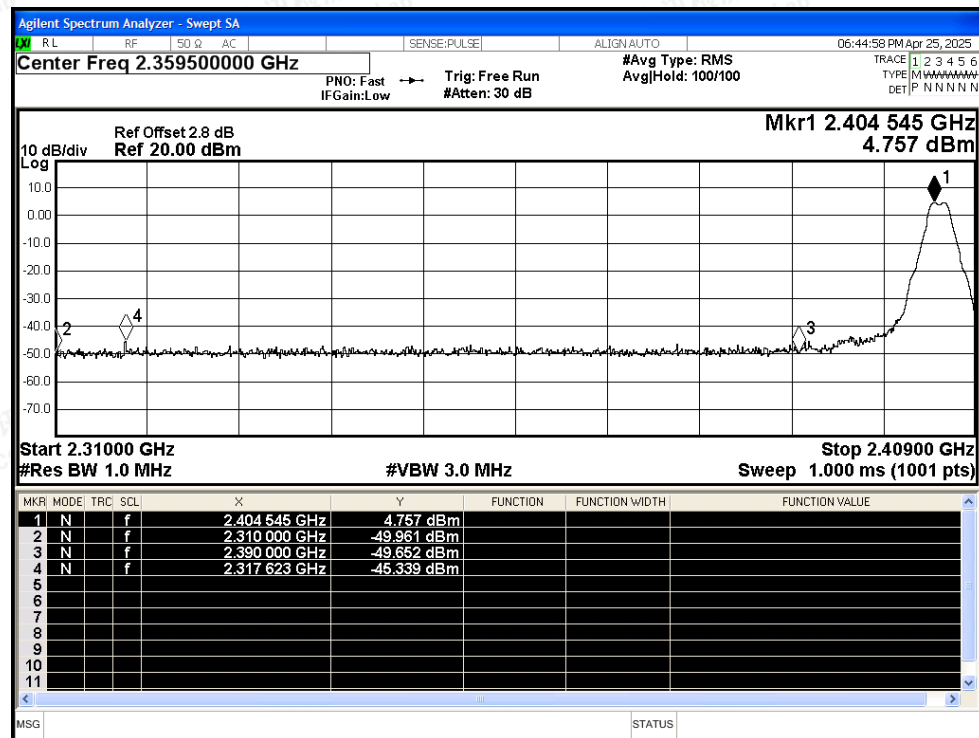
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	ZIGBBE	2405	Ant	2310	-49.96	5	-	50.30	Peak	74	Pass
NVNT	ZIGBBE	2405	Ant	2310	-57.67	5	0	42.59	Average	54	Pass
NVNT	ZIGBBE	2405	Ant	2317.623	-45.34	5	-	54.92	Peak	74	Pass
NVNT	ZIGBBE	2405	Ant	2388.507	-55.96	5	0	44.30	Average	54	Pass
NVNT	ZIGBBE	2405	Ant	2390	-49.65	5	-	50.61	Peak	74	Pass
NVNT	ZIGBBE	2405	Ant	2390	-56.48	5	0	43.78	Average	54	Pass
NVNT	ZIGBBE	2480	Ant	2483.5	-38.52	5	-	61.74	Peak	74	Pass
NVNT	ZIGBBE	2480	Ant	2483.5	-54.68	5	0	45.58	Average	54	Pass
NVNT	ZIGBBE	2480	Ant	2483.512	-38.52	5	-	61.74	Peak	74	Pass
NVNT	ZIGBBE	2480	Ant	2483.584	-54.45	5	0	45.81	Average	54	Pass
NVNT	ZIGBBE	2480	Ant	2500	-48.86	5	-	51.40	Peak	74	Pass
NVNT	ZIGBBE	2480	Ant	2500	-57.12	5	0	43.14	Average	54	Pass



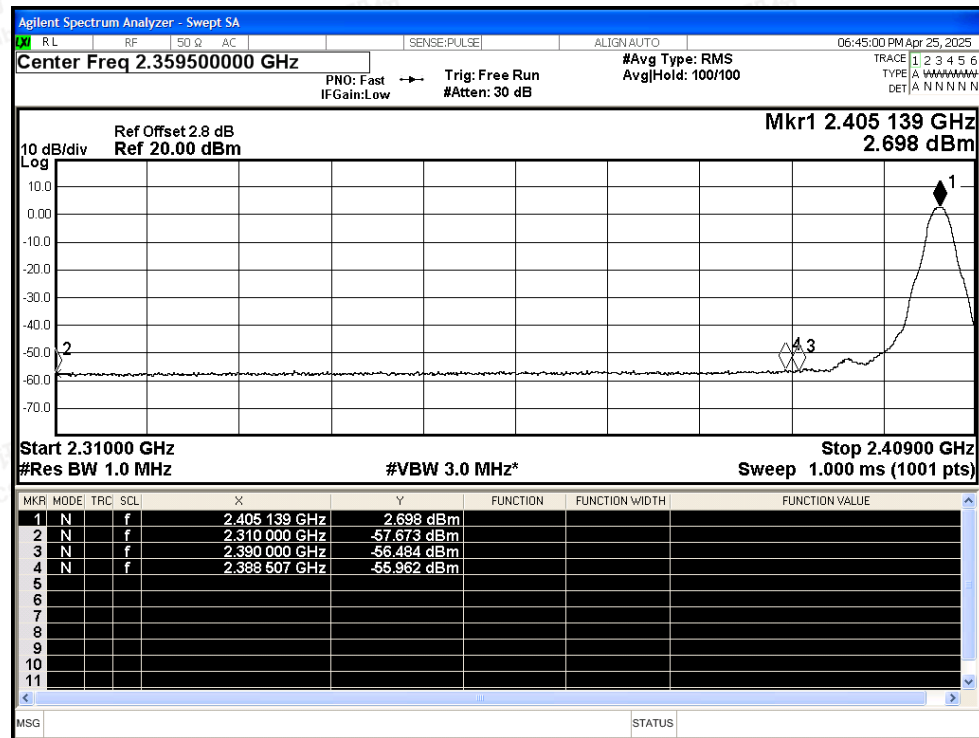


Test Graphs

Restrict Band NVNT ZIGBBE 2405MHz Ant Peak



Restrict Band NVNT ZIGBBE 2405MHz Ant Average



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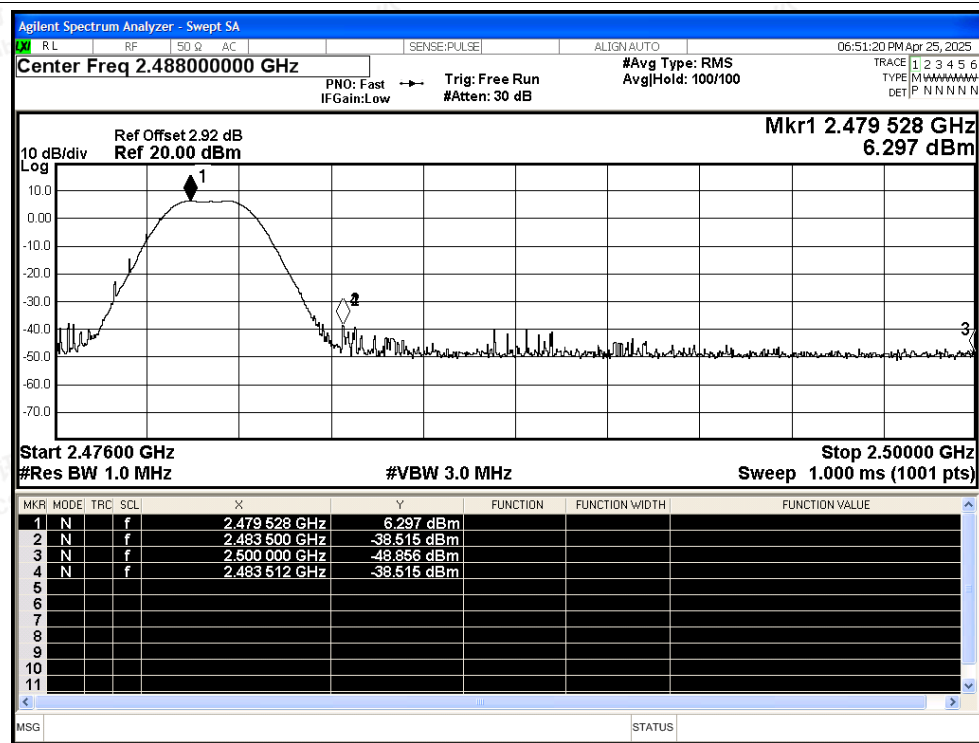
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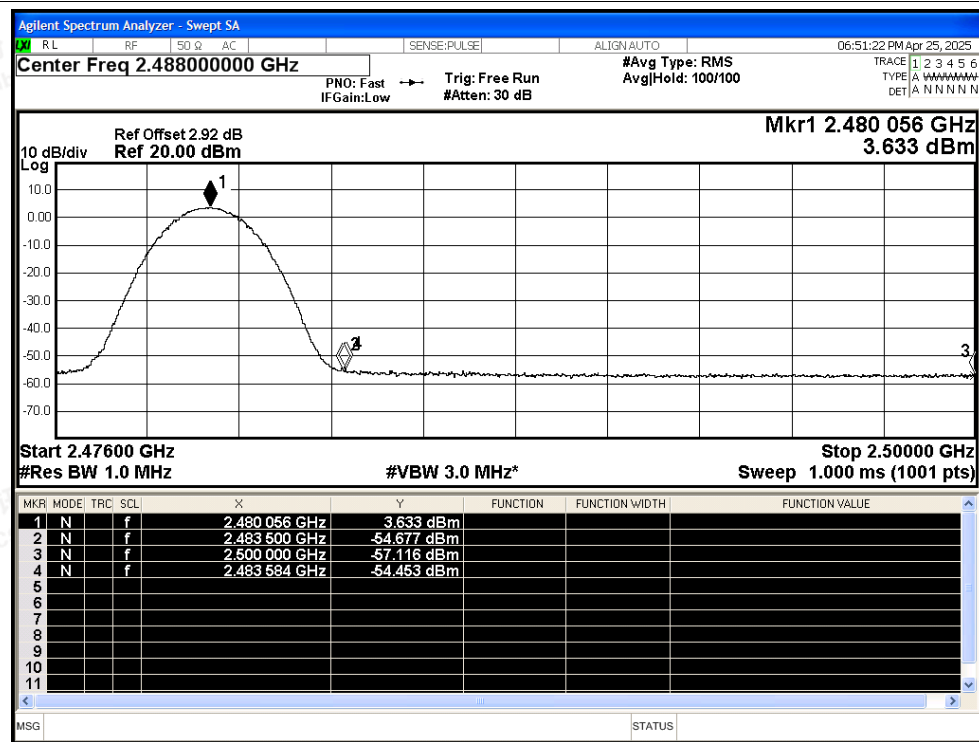
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Restrict Band NVNT ZIGBBE 2480MHz Ant Peak



Restrict Band NVNT ZIGBBE 2480MHz Ant Average



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